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C L A I M S

1. Process to prepare a lubricant having a dynamic viscosity at -35 °C of below 5000 cP by performing the following steps:

5 (a) contacting a feed containing more than 50 wt% wax in the presence of hydrogen with a catalyst comprising a Group VIII metal component supported on a refractory oxide carrier, and

10 (b) contacting the effluent of step (a) with a catalyst composition comprising a noble Group VIII metal, a binder and zeolite crystallites of the MTW type to obtain a product having a lower pour point than the effluent of step (b) and having a viscosity index greater than 120, and

15 (c) adding a pour point depressant additive to the base oil as obtained in step (b).

2. Process according to claim 1, wherein the noble Group VIII metal in step (b) is platinum.

3. Process according to any one of claims 1-2, wherein the binder in step (b) is a low acidity binder which
20 binder is essentially free of alumina.

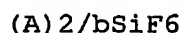
4. Process according to claim 3, wherein the binder is silica.

5. Process according to any one of claims 1-4, wherein the zeolite crystallites have been subjected to a
25 selective surface dealumination process.

6. Process according to claim 5, wherein the selective surface dealumination process comprises contacting the zeolite crystallites with an aqueous solution of a

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fluorosilicate salt wherein the fluorosilicate salt is represented by the formula:



wherein 'A' is a metallic or non-metallic cation other than H⁺ having the valence 'b', preferably ammonium.

7. Process according to any one of claims 1-6, wherein the wax containing feed is derived from a Fischer-Tropsch process, the Group VIII metal in step (a) is platinum and/or palladium and wherein the total effluent of step (a) is used as feed to step (b) in a series flow configuration.

8. Process according to any one of claims 1-6, wherein the feed to step (a) comprises at least 700 ppm sulphur, the catalyst used in step (a) is a pre-sulphided catalyst comprising a Group VIB metal and a non-noble Group VIII metal and wherein the total effluent of step (a) is used as feed to step (b) in a series flow configuration.

9. Process according to any one of claims 7-8, wherein the wax conversion in step (a) is between 40 and 60%.

10. Process according to any one of claims 1-6, wherein the feed to step (a) comprises between 700 and 2000 ppm sulphur, the catalyst used in step (a) is a pre-sulphided catalyst comprising a Group VIB metal and a non-noble Group VIII metal and wherein at least part of the ammonia and hydrogen sulphide which is present in the effluent of step (a) is separated from said effluent prior to using said effluent as feed of step (b).

11. Process according to claim 10, wherein the pressure in step (a) is between 100 to 150 bar and the pressure in step (b) is between 30 and 60 bar.

~~12. Process according to any one of claims 8-11, wherein the catalyst used in step (a) is a pre-sulphided~~

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hydrodesulphurisation catalyst comprising nickel and tungsten on an acid amorphous silica-alumina carrier.

13. Process according to claim 12, wherein the sulphided hydrodesulphurisation catalyst has a

5 hydrodesulphurisation activity of higher than 30%, wherein the hydrodesulphurisation activity is expressed as the yield in weight percentage of C₄-hydrocarbon cracking products when thiophene is contacted with the catalyst under standard hydrodesulphurisation conditions,
10 wherein the standard conditions consist of contacting a hydrogen-thiophene mixture with 200 mg of a 30-80 mesh catalyst at 1 bar and 350 °C, wherein the hydrogen rate is 54 ml/min and the thiophene concentration is 6 vol% in the mixture.

14. Process according to claim 13, wherein the hydrodesulphurisation activity of the catalyst is lower than 40%.

15. Process according to any one of claims 12-14, wherein the hydrodesulphurisation catalyst is obtained in a
20 process wherein nickel and tungsten were impregnated on the acid amorphous silica-alumina carrier in the presence of a chelating agent.

16. Process according to any one of claims 12-15, wherein the alumina content of the hydrodesulphurisation catalyst
25 is between 10 and 60 wt% as calculated on the carrier alone.

17. Process according to any one of claims 12-16, wherein the silica-alumina carrier has an n-heptane cracking test value of between 310 and 360 °C, wherein the cracking
30 test value is obtained by measuring the temperature at which 40 wt% of n-heptane is converted when contacted, under standard test conditions, with a catalyst consisting of said carrier and 0.4 wt% platinum.

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18. Process according to claim 17, wherein the silica-alumina carrier has an n-heptane cracking test value of between 320 and 350 °C.

5 19. Process according to any one of claims 12-18, wherein the catalyst comprises between 2-10 wt% nickel and between 5-30 wt% tungsten.

20. Process according to any one of claims 12-19, wherein the surface area of the hydrodesulphurisation catalyst is between 200 and 300 m²/g.

10 21. Process according to any one of claims 12-20, wherein the total pore volume of the hydrodesulphurisation catalyst is above 0.4 ml/g.